

IN THE CLAIMS:

Please cancel claims 1-7 without prejudice.

Please enter the following new claims 8 - 14.

1. 8. A high voltage transformer having a plurality of elements for voltage transformers, said elements comprising:

132 a high voltage transforming means (1, 1'),

a rectifier (2, 2'),

a filter (3, 3'),

a resistive divider (4, 4),

a high voltage switch (5, 5'),

a magnetic core (7, 7'),

a low voltage input (10),

wherein each rectifier, filter, resistive divider, high voltage switch, magnetic core, has a first end and a second end,

each first end being connected to zero voltage level;

each second end being opposite to each first end;

said rectifiers, filters, resistive dividers, high voltage switches, magnetic cores, are arranged in two differentiated groups,

a first group comprising positive voltage elements and

a second group comprising negative voltage elements;

the positive voltage elements are separated from the negative voltage elements by solid insulating means in two insulated chambers;

voltage towards the second end in each of said elements:

progressively increases in the positive voltage elements and;

progressively decreases in the negative voltage elements;

so that, at an equal distance from zero voltage level, the elements of each group have equipotential voltages.

2. ~~6~~. A high voltage transformer according to claim ~~1~~¹/~~8~~, wherein the progressive increase of voltage in the positive voltage elements and the progressive decrease of voltage in the negative voltage elements are both linear.
3. ~~10~~. A high voltage transformer according to claim ~~8~~¹/~~8~~, wherein the zero voltage level is located in an area where signals of the low voltage input are located.
4. ~~11~~. A high voltage transformer according to claim ~~10~~³/~~10~~, wherein the zero voltage level is located at an upper side of the transformer.
5. ~~12~~. A high voltage transformer according to any of claims ~~8~~¹⁻³/~~10~~ or ~~11~~⁴/~~11~~, wherein maximum level of potential is defined at lower ends of the high voltage switches.
6. ~~13~~. A high voltage transformer according to claim ~~8~~¹/~~8~~, wherein the two groups are separated by a single solid insulating means.
7. ~~14~~. A high voltage transformer according to claim ~~8~~¹/~~8~~, further comprising means for minimizing stray capacitances between the first group elements and the second group elements, by arranging said groups so that only a very small surface of the first group is opposed to the second group.